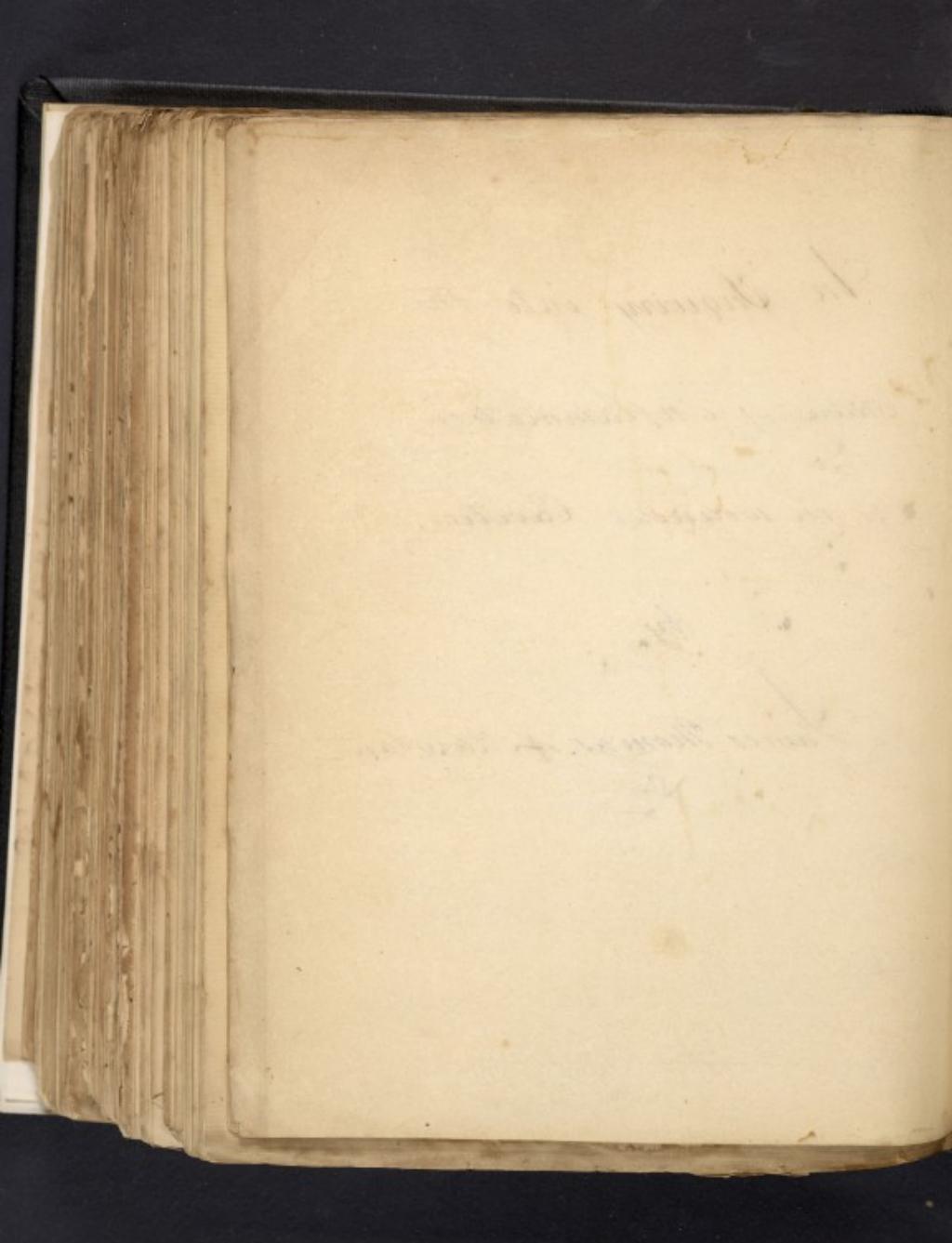


#18

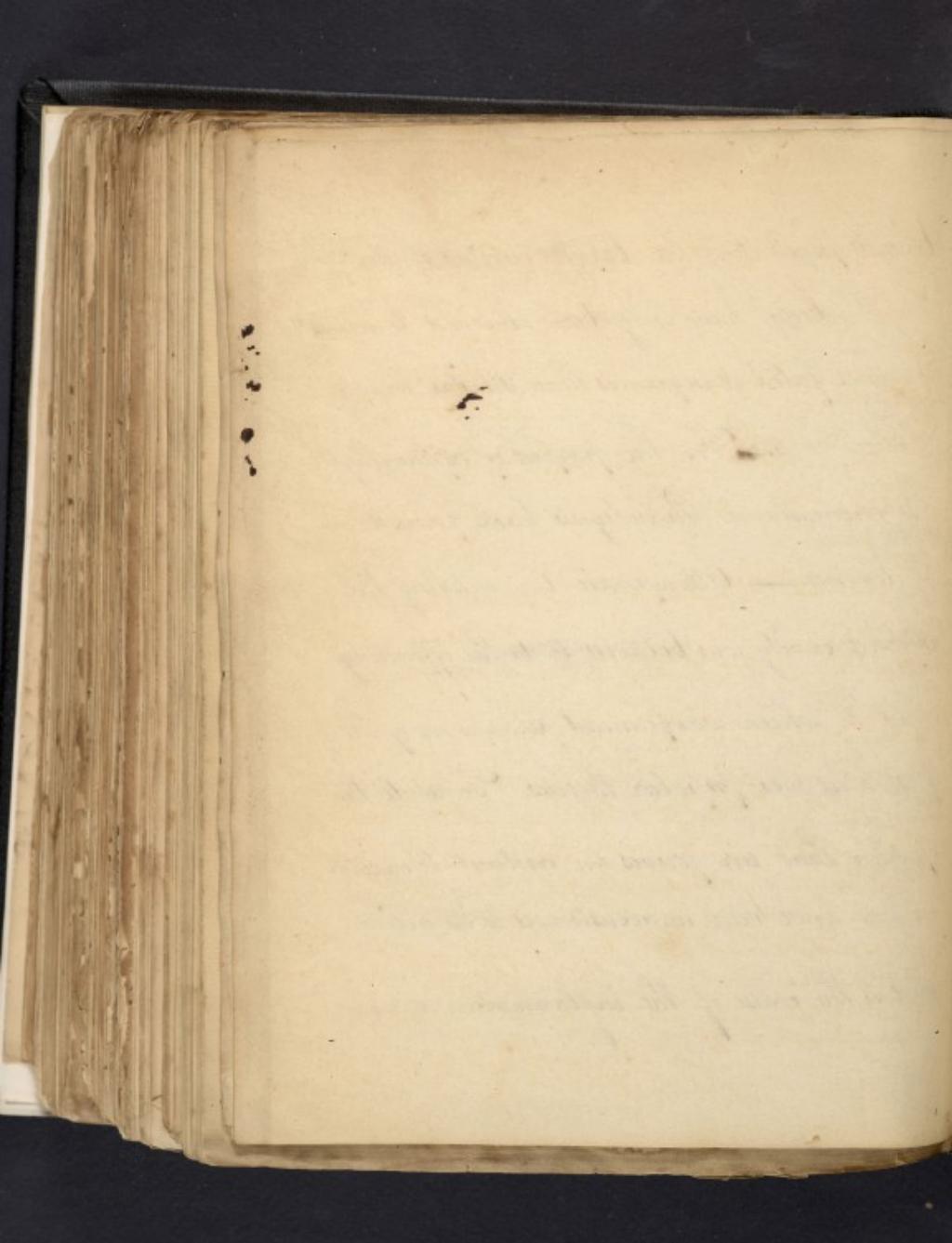
An Inquiry into the  
Cause of Inflammation  
in wounded Cavities.

by

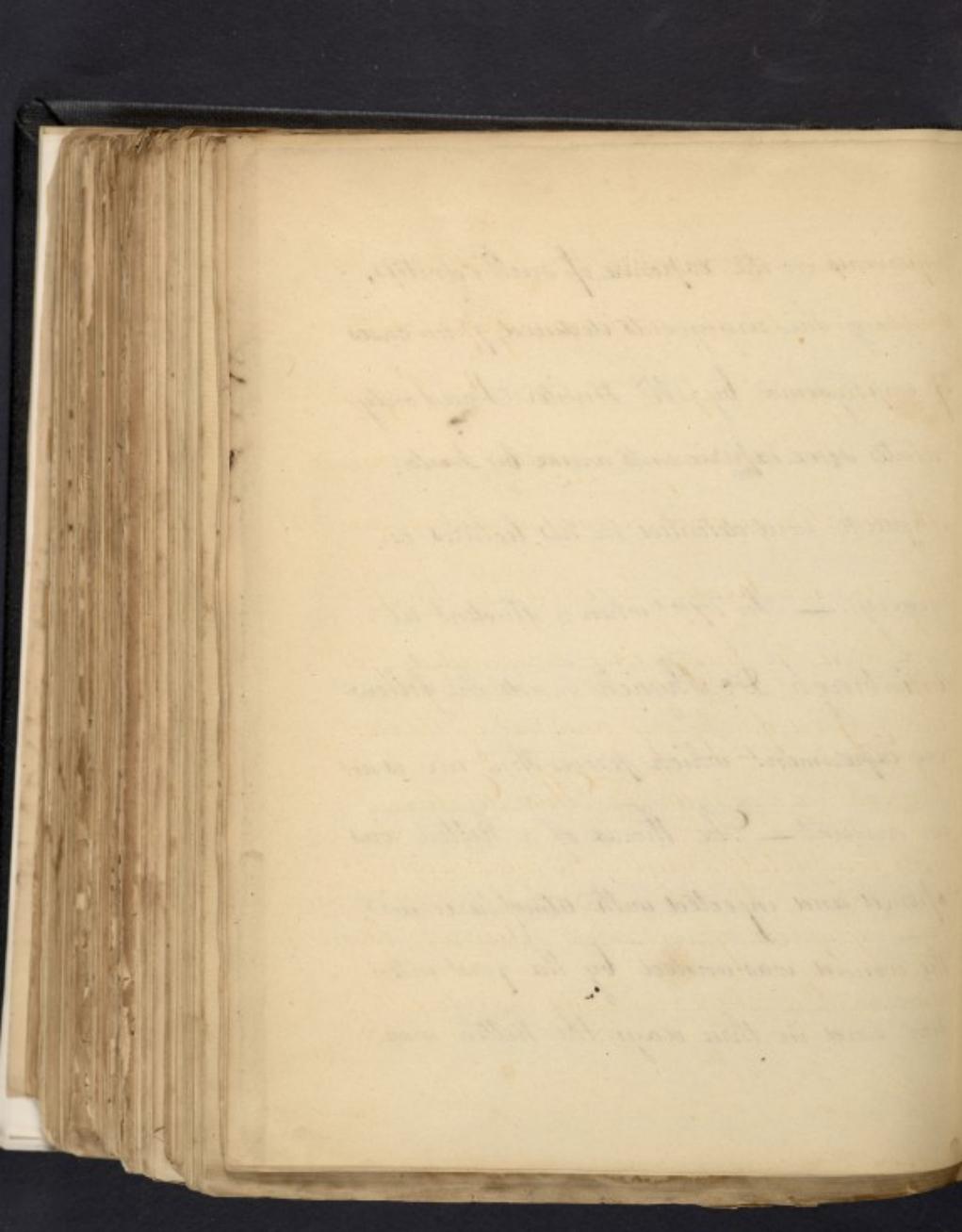
James Thomas. of Maryland.



Wounds penetrating the larger cavities of the  
human body have long been observed to occa-  
sion more fatal consequences than similar wounds  
in other parts. For the purpose of explaining  
this circumstance Pathologists have formed ma-  
ny theories. — Atmospheric air entering the  
exposed cavity was believed to be the offending  
cause on which was founded perhaps one of the  
first and most popular theories. To refute the  
opinion that air proves an irritant to cavities  
which have been unaccustomed to its action  
and is the cause of the inflammation which



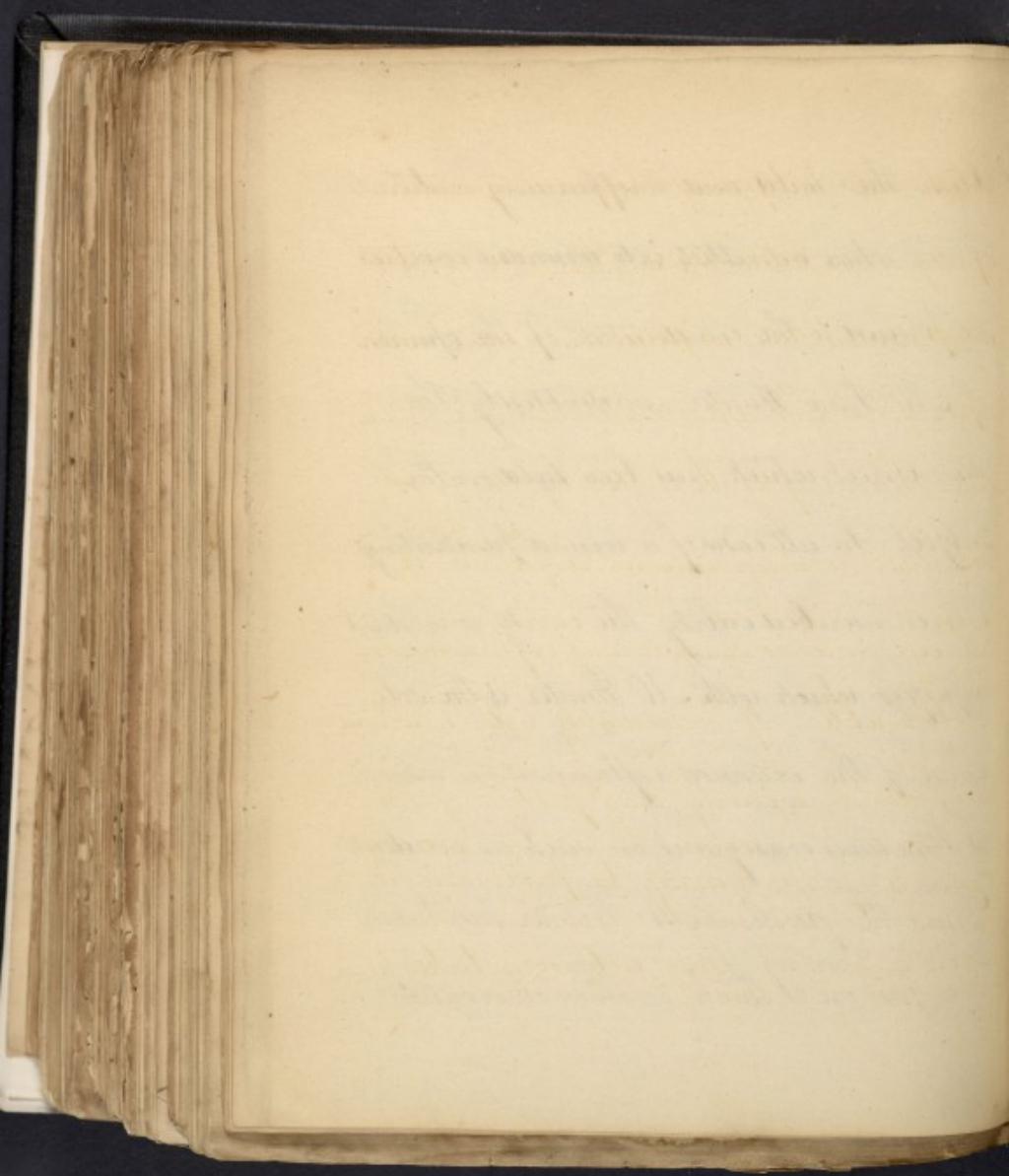
supervenes on the exposure of such cavities,  
omitting the arguments deduced from cases  
of emphysema by Mr. Hunter I need only  
relate some experiments made by Doctor  
Physick and detailed in his lectures on  
surgery.— In 1791 when a student at  
Edinburgh Dr. Physick made the follow-  
ing experiment which proves that air is not  
an irritant— The thorax of a kitten was  
opened and injected with atmospheric air;  
the wound was united by the first inten-  
tion and in three days the kitten was



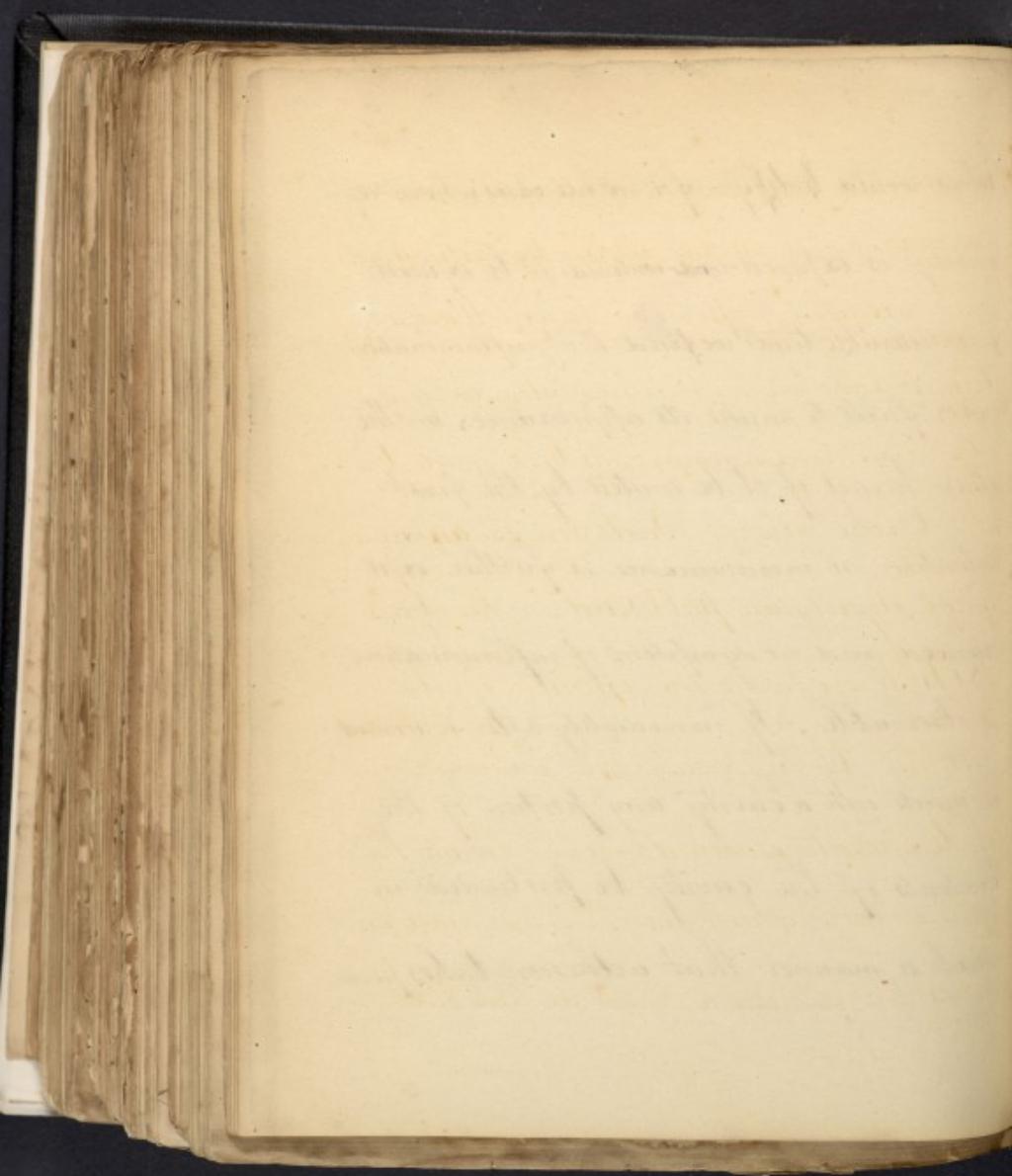
killed upon examination the two sides of the  
thorax were totally and equally free from  
all vestiges of inflammation. Dr. Physick  
relates also the case of an officer who having  
entered into a quarrel received a stab with a  
dirk in the breast, the cavity of the tho-  
rax and the lungs were so wounded that  
air passed freely into and out of the chest  
through the wound. — This Gentleman  
was completely cured in a week without  
the symptom of inflamed pleura. Be-  
lieving the above cases sufficient to esta-  
blish

invenit ut illi adiutoriis tunc  
nisi et pugnare possit non  
potest. Et adiutoriis pugnare  
possunt nisi ut illi adiutoriis  
adirentur. Et adiutoriis  
adirentur ut illi adiutoriis  
adirentur.

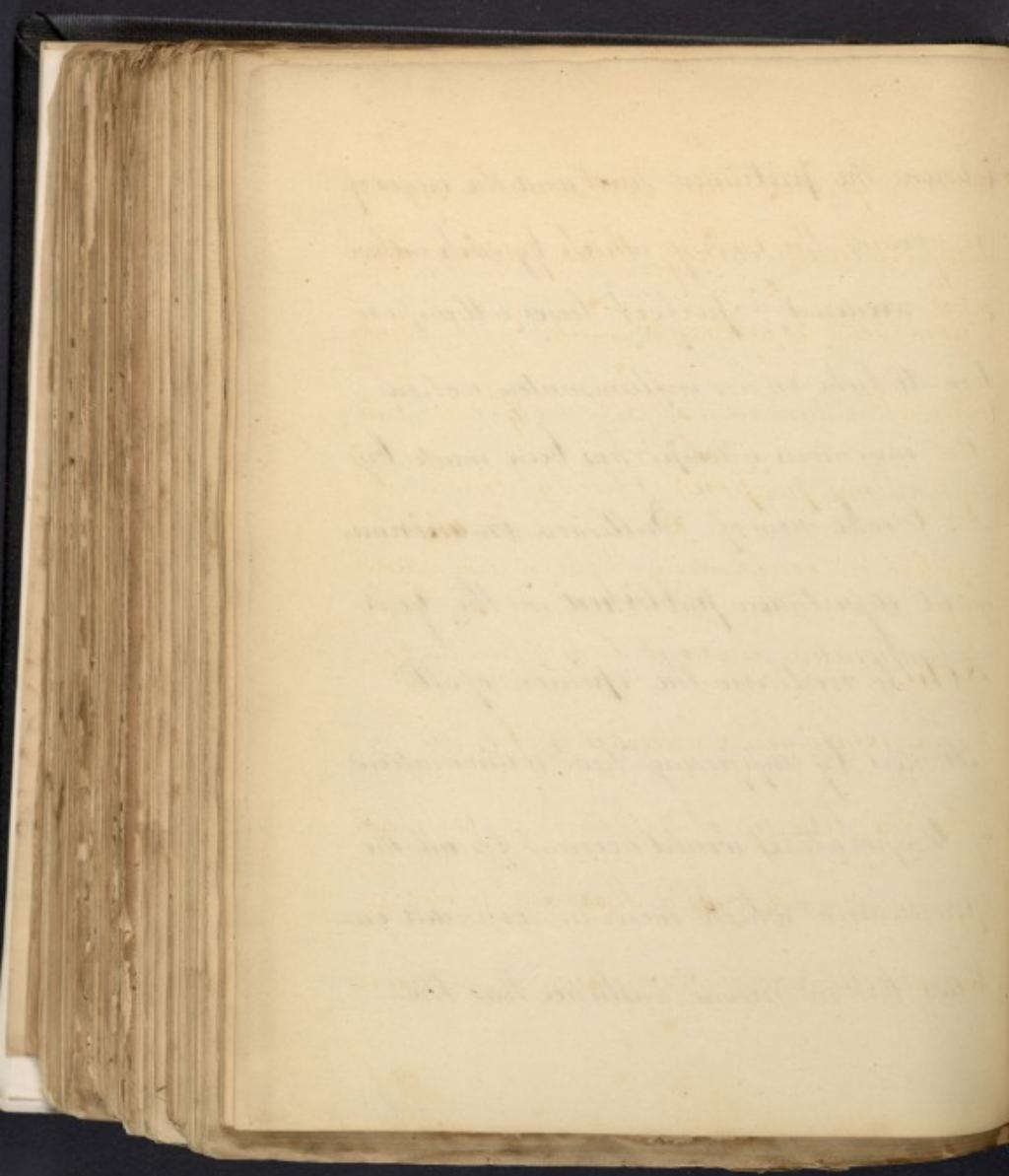
blish the mild and unoffending nature  
of air when admitted into wounded cavities  
we proceed to the consideration of the opinion  
of Mr John Hunter undoubtedly the  
most correct which has been held on the  
subject. In all cases of a wound penetrating  
a circumscribed cavity the cavity is rendered  
imperfect which with Mr Hunter is the sole  
cause of the extensive inflammation which  
is sometimes consequent on such an accident.  
That the position Mr Hunter has taken  
is a just one I think common observation



alone would testify; for in all cases where a cavity is exposed and continues to be exposed a considerable time we find that inflammation never fails to make its appearance; on the other hand if it be united by the first intention no inconvenience is further experienced and no symptom of inflammation is observable. If immediately after a wound is made into a cavity any portion of the contents of the cavity be protruded in such a manner that adhesion takes place

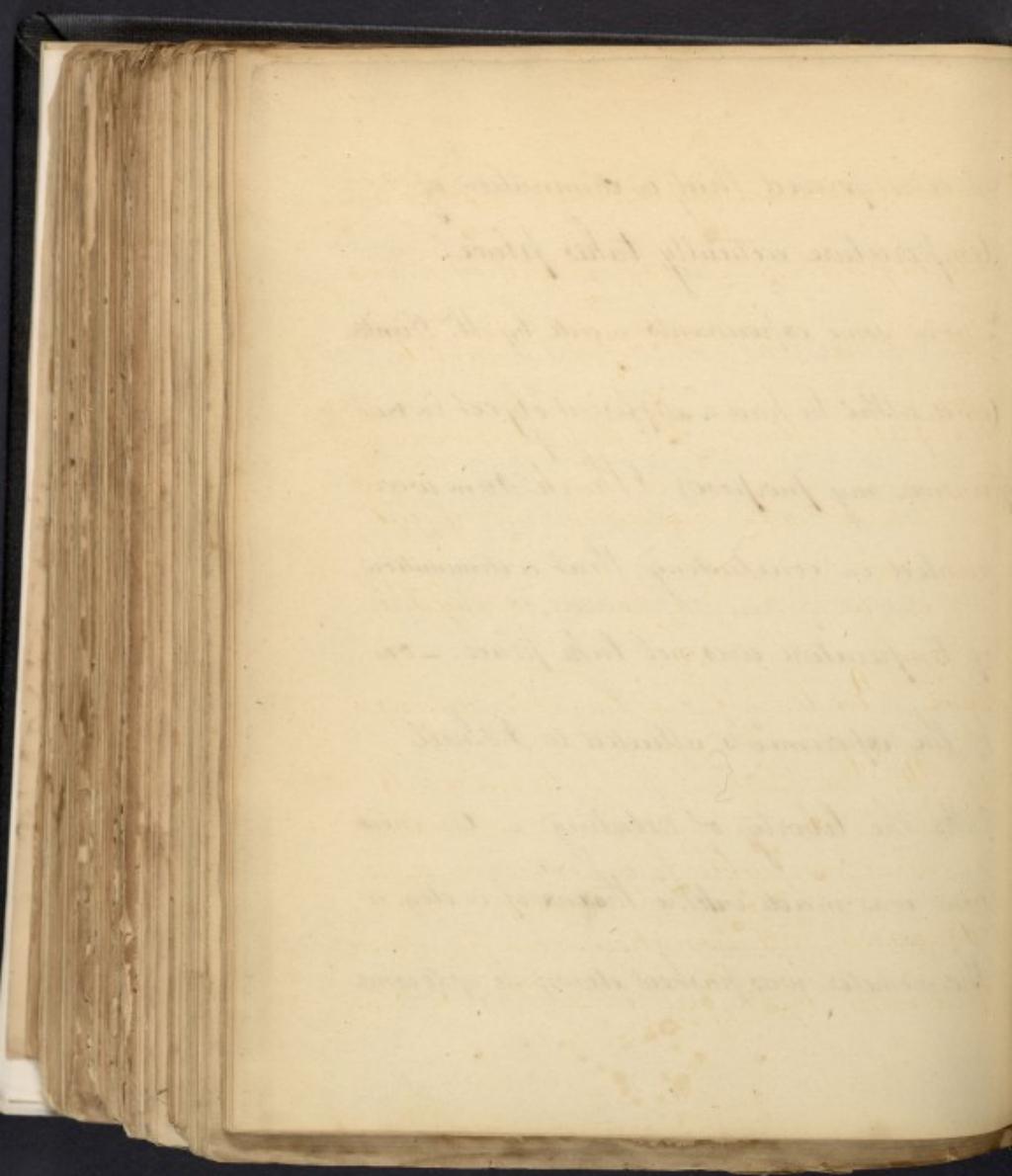


between the protruded part and the edges of  
the wound the cavity which by such adhesi-  
on is rendered perfect loses all disposi-  
tion to take on an inflammatory action  
An ingenious attempt has been made by  
Dr. Cocke now of Baltimore in an anau-  
gural dissertation published in the year  
1804 to overthrow the opinion of Mr.  
Hunter by supposing that a diminution  
of temperature would account for all the  
phenomena which occur in wounded ca-  
vities but in no one instance has the



I octo proved that a diminution of  
temperature actually takes place.

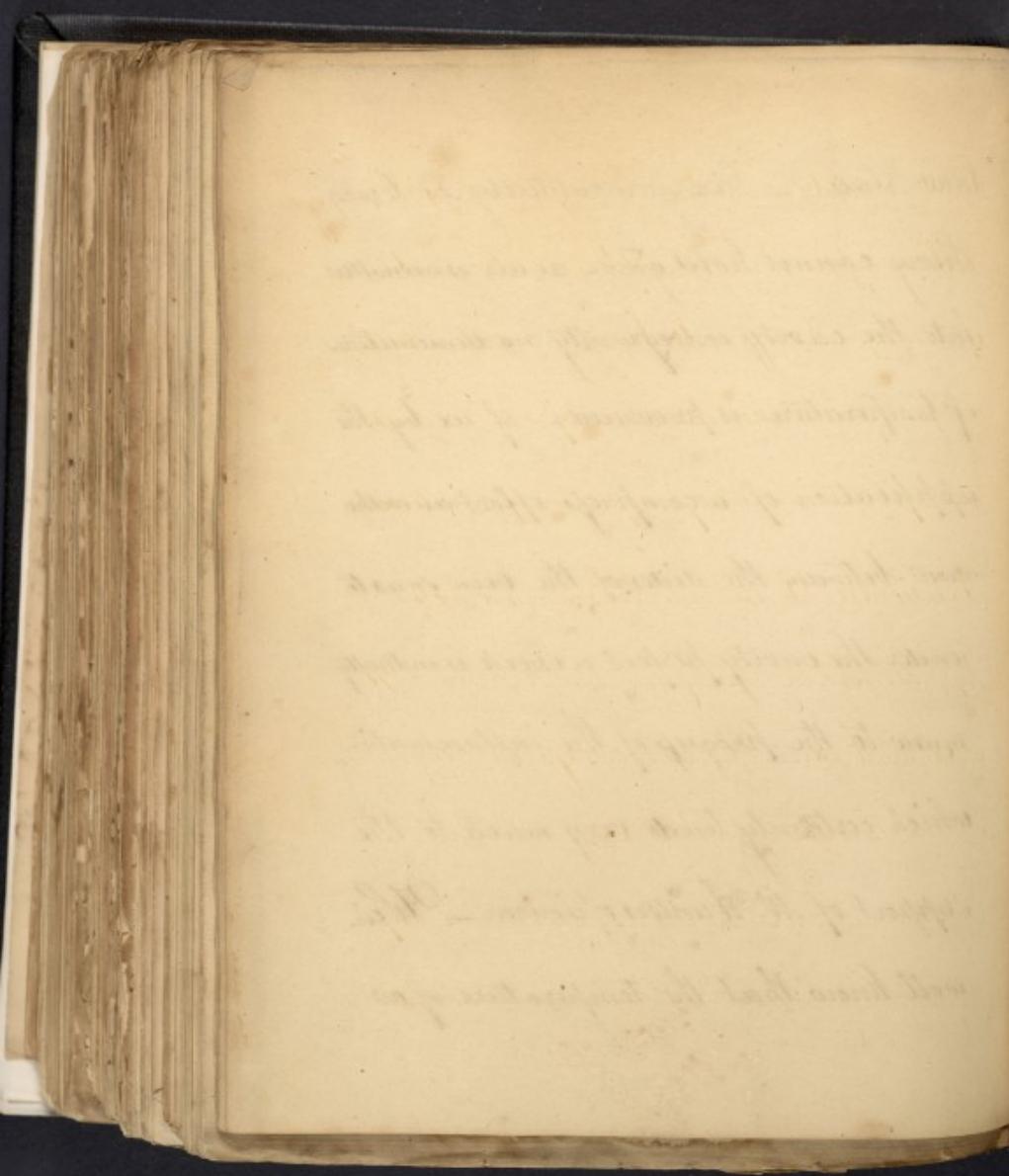
From some experiments made by W. Hunter  
(and altho' he had a different object in view  
they answer my purpose) I think I am war-  
ranted in concluding that a diminution  
of temperature does not take place. - one  
of the experiments alluded to I shall  
take the liberty of relating. - An inci-  
sion was made into the ~~thorax~~ of a dog a  
thermometer was pushed down so as to come



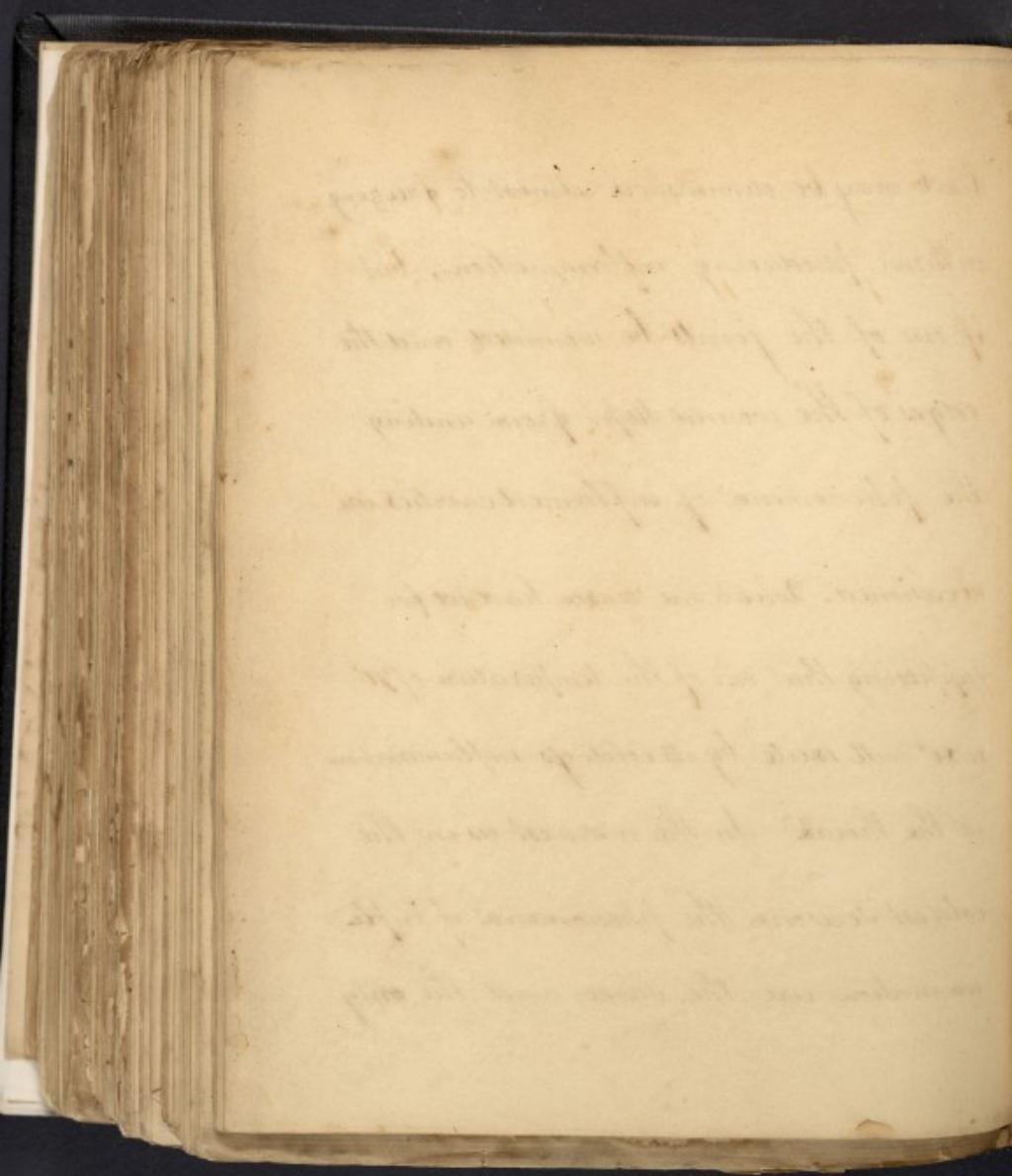
in contact or nearly so with the diaphragm  
the degree of heat was a hundred and one  
the wound was not allowed to heal by  
the first intention the day following  
the thermometer was again introduced  
the degree of heat appeared exactly the  
same. We learn from the observations  
of Mr Hunter that the internal coats  
of veins are liable to an extensive and  
dangerous inflammation when punctured  
and union by the first intention does not



take place. — here undoubtedly Dr. Gads  
theory cannot hold good — no air is admitted  
into the cavity consequently no diminution  
of temperature is produced — if we by the  
application of a compress effect an adhe-  
sion between the sides of the vein so as to  
render the cavity perfect a check is instantly  
made to the progress of the inflammation  
which certainly tends very much to the  
support of W. A'wars opinion. — We  
well know that the temperature of a



limb may be diminished almost to freezing without producing inflammation, but if one of the joints be wounded and the edges of the wound kept from uniting the phenomena of inflamed cavities are occasioned. What one reason have we for supposing that air of the temperature of 70° or 80° will excite by its coldness inflammation in the thorax? In the warmest as in the coldest seasons, the phenomena of inflammation are the same and the only



*Cat.*

circumstance necessary to excite it, is the  
imperfection of the cavity.

